

A NEW SPECIES OF *LOPHOPETALUM* (CELASTRACEAE), A GENUS
NEW FOR AUSTRALIA

N. BYRNES

Primary Industries Branch, Northern Territory Administration

(Plate IX)

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Synopsis

A new species of *Lophopetalum* is described: *Lophopetalum arnhemicum* N. Byrnes, from Katherine Gorge (14° 20' S., 132° 27' E.), Northern Territory, Australia.
The genus is new for Australia.

INTRODUCTION

The genus *Lophopetalum* is widely distributed throughout S.E. Asia and the islands to the north of Australia, where it is represented by about 18 species. Its discovery in Australia extends the range of the genus, but the species is distinct from those of Malaysia.

Through correspondence with Dr. C. G. G. J. van Steenis, Dr. Ding Hou commented that the species was "very distinct and interesting, very different from the New Guinea species". Botanical surveys of the sandstone escarpment area of Arnhem Land, a previously poorly explored area, are revealing a number of new species and extending the range of many known species. This specimen was first collected in Katherine Gorge on a preliminary survey during December, 1966, but its identity as a new species was not realized until 1968. Complete material was collected during that year from a tree near the mouth of the gorge. The genus *Lophopetalum* is represented by evergreen trees with opposite or decussate leaves and is distinguished from other members of Celastraceae by having three-cornered dehiscent capsules with three loculi, each containing several seeds and each seed being completely surrounded by a wing.

Lophopetalum arnhemicum N. Byrnes, sp. nov.

Arbor 8 m. attingens cortice ramulorum laevi trunci versus basin tessellato saepe eroso. Folia opposita petiolo 0.5-1.0 cm. longo lamina lanceolata 6-12 cm. longa 1.5-2.5 cm. lata apice acuta basi anguste cuneata, venatione camptodroma. Inflorescentia glabra thyriformis usque ad 10 cm. longa pedunculis ad 1 cm. longis pedicellis 3-5 mm. longis. Flores circiter 1 cm. diametro calyce parvo discum vix superante. Petala late ovata usque ad 3 mm. longa sine appendiculis. Discus planus vel supre convexus. Stamina brevissima antheris ovatis. Pistillum triangulariter pyramidale discum 2 mm. superans. Ovarium triloculare ovulis in locula quoque 6-8 capsula triangularis fusiformis 6-8 cm. longa. Semina plana circiter 3.5 cm. longa 1.0 cm. lata ala inclusa.

Holotype: Katherine Gorge National Park, N. Byrnes 921; 7 Sep. 1968 (Darwin 2852).

Isotypes: K, L, A, CANB, NSW, BRI, PERTH, MEL, NT.

Paratype: Katherine Gorge National Park, N. Byrnes 1180; 25 Nov. 1968, Darwin, K, L, BRI, NSW, MEL.

A tree to 8 m. high. Bark smooth on the branchlets becoming tessellated and often eroded on the trunk. *Leaves* opposite on petioles 0.5-2.5 cm. long;

lamina lanceolate, 6–12 cm. long, 1.5–2.5 cm. wide with arched venation, acute, narrow cuneate at the base. *Inflorescence* a thyrse, glabrous, up to 10 cm. long; peduncles to 1 cm. long; pedicels 3–5 mm. long. *Buds* shortly conical or globose to 3 mm. diam. *Flowers* about 1 cm. diam. *Calyx* 4 mm. diam. with depressed triangular lobes under 0.1 mm. long. *Petals* broadly ovate, 3 mm. long, without appendages. Disc obscurely five-angled, flat or slightly convex about 3 mm. diam. *Stamens* half as long as petals with ovate anthers. *Gynoecium* a triangular pyramid exerted about 2 mm. beyond the disc; ovary trilocular, each loculus containing 6 to 8 ovules. *Fruit* a triangular spindle-shaped capsule 6–8 cm. long, dehiscing loculicidally. *Seeds* thin, flat, winged, 3.5 × 1.0 cm. including the wing.

The following description of the pollen was prepared by Mr. J. Muller of Rijksherbarium.

Pollen grains in tetrahedral tetrads. Total size 46 (52.3) 55 μ , individual grains spherical, 29 (33.4) 36 μ .

Pores circular, 4 (4.8) 6 μ in diameter, not opposite in tetrad.

Total wall thickness 2 (3.1) 3.5 μ .

Endexine \pm 1.5 μ thick.

Columellae distinct, circular, 0.5 μ in diameter, \pm 1.5 μ high, arranged in a reticulate pattern in single rows.

Tectum reticulate; lumina isodiametric, 0.5–0.75 μ in diameter; muri 0.5 μ wide, 0.5 μ high.

COMMENT

The pollen of this species belongs to the *Lophopetalum* B group as defined by Ding Hou (*Blumea*, XVII, I, 1969). It is very similar to that of *L. rigidum*, *L. floribundum*, *L. macranthum*, *L. javanicum*, *L. ledermanni*, *L. torricellense* and *L. subovatum*.

This species has been found along the Katherine, South Alligator and East Alligator River systems generally restricted to the banks of permanent or larger seasonal streams in the hilly sandstone areas. It flowers in August and September with the fruit maturing to release seeds during December and January.

Reference

DING HOU, 1963.—Celastraceae I. *Flora Malesiana*, 6: 227–291 (Leyden).

———, 1969.—Pollen of Sarawakodendron (Celastraceae) and some related genera with notes on techniques. *Blumea*, 17: 97.



TYPE

SIX 86
HERBARIUM OF NORTHERN TERRITORY
AUSTRALIA
No.
Name *Lophopetalum arnhemicum*
SP. nov.
Loc. Katherine Gorge National Park
Coll. N. Byrnes 921 Date 7 Sep 1968
Notes Banks of river - sandy alluvium
with rocks - Small tree
Co 8 m Det. N. Byrnes
BWA Her 1972

The holotype of *Lophopetalum arnhemicum* N. Byrnes.